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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,520	08/22/2003	Joachim Tachtler	080437.5261SUS	8771
23911	7590	09/07/2006	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/645,520

Applicant(s)

TACHTLER ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-10 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 20, 2006 has been entered.

This Office action addresses claims 5-10 and 12. Claims 6-10 contains allowable subject matter and claims 5 and 12 remain rejected over Diethelm. All the claims are subject to a new ground of rejection under 35 USC 112 first paragraph. This action is non-final.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 5-10 and 12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for air flowing “directly along the anode side,” does not reasonably provide enablement for air flowing “directly along the anode.” The specification

does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The new language encompasses an embodiment where air is flowed directly to the anode (i.e., anode catalyst) during fuel cell operation, which is not supported by the specification. Correction is required.

***Claim Rejections - 35 USC § 102***

4. Claims 5 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Diethelm (U.S. Patent 5,212,023). The reference is directed to a solid electrolyte fuel cell comprising an integrated heat exchanger (see abstract). The heat exchanger is an intermediate plate that separates two fuel cells (40) and comprises at least two partial elements (i.e., plates 31a, 31c) (see Figs. 3 and 5). Intake air (stream “A”) is passed through the heat exchanger and is then routed in the opposite direction across the surface of the cathode (stream “B”). Stream “A” is in direct thermal communication with stream “C,” the anode fuel gas, across plate 31c. Regarding claims 5 and 12, the “partial elements” can be defined as the flat central regions of the separator plates (31a, c) and as such are “mirror images” of each other.

Thus, the instant claims are anticipated.

***Response to Arguments***

5. Applicant's arguments filed June 20, 2006 have been fully considered but they are not persuasive. Applicant states that the Diethelm reference does not teach the newly-claimed feature of "at least one conducting end or intermediate plate *extending substantially perpendicularly* between said parallel opposing faces" (emphasis added). In response, it can be shown that Diethelm teaches a plate structure extending substantially perpendicularly between the parallel opposing faces, which plate structure comprises two substantially identical partial elements, as recited in claims 5 and 12. The plate structure may be envisioned as the structure comprising essentially all the integral elements between the individual fuel cells (11). Such structure includes supporting members (shown near 42 and 43) extending perpendicularly between the fuel cells. Further, the structure contains the mirror-image partial elements which can be visualized as the central portions of plates 31a, 31c. As such, it can be seen that the structure of Diethelm still meets the claim language.

***Allowable Subject Matter***

6. Claims 6-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claim 6 recites the presence of a baffle between the two substantially identical or mirror image partial elements. Diethelm does not teach or fairly suggest this configuration.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J-V

Jonathan Crepeau  
Primary Examiner  
Art Unit 1745  
September 5, 2006